Karnataka Material Test House Pvt. Ltd.,

Soil Investigation, Concrete and NDT Testing ,Topo Survey, & Project management Consultancy

CIN No: U74210KA2004PTC035137 G S T No: 29AACCK4994Q1ZI PAN No: AACCK4994Q

No.KMTH/PMC/YD/2020-21/W3

Date:12-06.2021

To,
The Executive Engineer
Yelahanka division,
Bruhat Bengaluru Mahanagara Palike, Bengaluru.

"PMC CERTIFICATE AND INSPECTION REPORT"

Dear Sir,

Sub: Regarding inspection report for the below mentioned work.

Name of work: "Comprehensive Development of roads and drains at Deo marvel layout, AMS layout, swagath layout, akashavani layout, chowdappa layout and GKVK layout inward no 3 & 4 of yelahanka division (PACKAGE NO-03)"

Item No	Description Of Work	Unit	Quantities		Total Quantity
			1st&Part	2nd&Part	
1	KSRRB 300-1. Earthwork excavation by manual means for roads, drains & similar works in ordinary soil excavated surface levelled and sides neatly dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specifications	Cum	5162.00	0.00	5162.00
2	KSRRB M2100-10. Providing and laying Plain cement concrete of mix 1:3:6 with OPC @ 220kgs, with crushed 40mm and down size graded granite metal coarse aggregates @0.89cum and fine aggregates @ 0.46cum, in foundation mechanically mixed, placed in foundation and compacted by vibration including curing for 14 days including cost of all materials, labour, HOM curing, form works, scaffolding and centering complete as per specifications.	Cum	810.20	0.00	810.20

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Karnataka Material Test House Pvt Ltd. Bangalore

Off & Lab :No. 8 (10/3), 4th cross, Basaveshwara layout, Nagashettihalli, RMV 2nd Stage, BENGALURU 560094
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3	Providing and laying plain/reinforced cement concrete for side drains using M20 nominal mix concrete with OPC at 300 kgs. With 20mm and sown size granite metal course aggregates at 0.69 cum and fine aggregates at 0.43 cum machine mixed, well compcted for walls and bottom including centring shuttering cost of material HOM of machinary curing etc., complete execluding cost of steel as per MORTH specification no. 1500, 1700, 2200 including cost of material labour HOM complete as per specification.	Cum	1493.68	0.00	1493.68
4	KSRRB - M2300-14: Providing TMT steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, palcing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining memebrs wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications.	Tonnes	95.13	0.00	95.13
5	Providing and Fixing pre cast covering Slab 100mm thick made out of CC 1:2:4 and jelly 20mm Down size with steel reinforcement including form work,curing,including cost of alll materials, labour,hire charges of machinery, loading, unloading, lead and lift,transportation etc ,complete.As per Engineer incharge.	Sqm	3924.99	0.00	3924.99
6	Providing and fixing RCC precast cover slab of 250mm thick for drain in cement concrete 1:1.5:3 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per drawing and the directions of Engineer in-charge.	Sqm	161.28	0.00	161.28

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Divisional Engineer
Yelahanka Division

7	Providing and fixing pre cast solid cement concrete kerb stones made out of CC 1:2:4 with top and bottom width 114 and 165 mm respectively, 400mm high and 450mm in length finished with CM 1:3 plastering and finishing cutting including formwork, curing, including cost of materials, labour charges of machinery, loading and unloading, lead and lift, transportation ete.,complete.	No's	7585.00	0.00	7585.00
8	Painting two coats after filling the surface with synthetic enamel paint in approved shades on new plastered concrete surfaces, with materials, labour complete as per specifications.	Sqm	1389.36	0.00	1389.36
9	KSRRB M300-14. Excavation for roadwork in all types of soil by mechanical means including cutting and loading to tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transportation with a lead of 1.00 km and complete as per specifications.	Cum	5541.27	0.00	5541.27
10	KSRRB 300-46. Scarifying by mechanical means stone metal crust 50mm to 100mm thick by along with 20mm premix carpet / surface dressing and stacking of old serviceable materials including cost of all labour charges, HOM complete as per specifications.	Sqm	7036.11	0.00	7036.11
11	KSRRB 300-58. Compaction of original ground with maximum of 6 passes of 8 to 10 tonnes power roller including filling in depression occuring during rolling including cost of all labour, HOM of machinery complete as per specifications.	Sqm	10746.99	0.00	10746.99
12	Construction of granular sub-base Grading-V as Sub-base and drainage layer by providing coarse graded crushed stone aggregates of granite/ trap/basalt material, mixing in a mechanical mix plant at OMC, Carriage of mixed material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the 98 % proctor density, complete as per specifications.	Cum	3721.97	0.00	3721.97

13	KSRRB M400-17. Providing, laying, spreading and compacting cushed stone aggregates of granite / trap / basalt to wet mix macadam specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed materials by tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications.	Cum	6910.74	0.00	6910.74
14	KSRRB M500-6. Providing and applying primer coat with S.S. bitumen emulsion on prepared surface of granular base such as WMM including cleaning of road surface and spraying primer at the rate of 0.60 kg / sqm using mechanical means complete as per specifications.	Sqm	11279.61	18889.66	30169.27
15	KSRRB 500-2. Cleaning the existing black topped surface with brooms, soft brushes and finally dusting with old gunny bags and / or compressed air to receive bituminous treatment including cost of all materials, labour, HOM complete as per specifications.	Sqm	8160.51	0.00	8160.51
16	KSRRB 500-7. Providing and applying tack coat using 80/100 grade bitumen(VG10) on the prepared black topped surfaces at 2.5 kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM complete as per specifications.	Sqm	18784.16	18888.81	37672.97
17	KSRRB M500-17. Providing and laying dense graded bituminous macadam using crushed aggregates of specified grading, premixed with VG30 grade bituminous binder and, transporting the hot mix to work site, laying to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction in all respects complete as per specifications Clause 505 of MORTH 5th revisionusing 40/60 TPH capacity H.M.P. with Mechanical	Cum	625.11	923.72	1548.83

18	Providing and laying bituminous concrete 40mm thick with hot mix plant, using crushed aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site, laying with a paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction in all respects complete as per specifications. Clause 507 of MORTH V revision as per IRC SP-53-2015. using 40-60 TPH capacity HMP with mechanical paver grading II (30-45mm) with 5.4 % of modified bituminus binder consisting of 4.97% of VG-30 bitumen (60/70 grade) and 0.43% of plastomeric thermoplastics (waste plastic	Cum	676.24	683.05	1359.29
19	KSRRB M800-13.Road Marking with Hot Applied Thermoplastic Compound with Reflectrising Glass Beads on Bituminous Surface/ Concrete Surface: Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35 standards specified. The finished surface to be level, uniform and free from streaks and holes complete as per specifications.	Sqm	690.78	726.07	1416.85
20	KSRRB M800-35. Supply and Installtion of Moulded Shank Raised Pavement Markers made of polycarbonate and ABS(Acrylonitrile Butadiene Styrene) moulded body and reflective panels with micro prismatic lens capable of providing total internal reflection of the light entering the lens face and shall support a load of 16000 kg tested in accordance to Specifications of Category A of MORTH Circular No RW/ NH/33023/10-97 – DO III Dt 11.06. 1997. The height, width and length shall not exceed 50 mm, 100 mm and 102 mm and with minimum reflective area of 13 Sqcm on each side and the slope to the base shall be 35 degree. The strength of detachment of the integrated cylindrical shanks, (of diameter not less	No's	1066.00	962.00	2028.00

Karnataka Material Test House * Bangalore

Project Bengaluru Railway
Yelahanka, Division

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21	KSRRB M600-1.Providing and Constructing dry lean cement concrete mix CC 1:5:10 base with OPC 25mm and down size graded granite metal coarse aggregate at 0.86cum and fine aggregates @0.58cum over a prepared sub-base, coarse and fine aggregate conforming to IS: 383-2016,aggregate cement ratio not to exceed 15:1, Aggregate gradation after blending to be as per Table 600-1,optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant, transported to site, laid with a paver, compacting with 8-10 tonnes	Cum	134.36	0.00	0.00
22	Constructing un-reinforced, plain cement concrete for pavements using Grade concrete M30 over a prepared base with OPC coarse aggregate at 0.69 cum, fine aggregates at 0.46 cum,Coarse and fine aggregate conforming to IS:383-2016, with Superplastizer at 3 lts conforming to IS 9103-2008. mixed in a concrete mixer of not less than 0.6 cum capacity and appropriate weigh batcher as per approved mix design, laid in approved fixed side form work (steel channel, laying and fixing of 125 micron thick polythene film, wedges, steel plates including levelling the form work as per drawing). & Spreading the concrete with shovels, rackers compacted using needle, screed and plate vibrator and finished with	Cum	309.42	0.00	0.00

With respect to the above subject and name of work, We have inspected the work , Quantity and Quality of above mentioned Items of work was found to be satisfactorily completed for the 2nd and Final Bill.

Thanking You,

With regards
Karnataka Material Test House Pvt Ltd.,

Narayanswamy.B
Managing Director

Karnataka Material Test House Bangalore

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Executive Engineer
Project Bengaluru Rahanger
Yelahanka, Division

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No.KMTH/PMC/YD/2020-2021/W3 Date:12-06.2021

To,
The Executive Engineer
Yelahanka division,
Bruhat Bengaluru Mahanagara Palike, Bengaluru.

"FREQUENCY AND QUALITY REPORT"

Dear Sir,

Sub: Regarding inspection report for the below mentioned work.

Name of work: "Comprehensive Development of roads and drains at Deo marvel layout, AMS layout, swagath layout, akashavani layout, chowdappa layout and GKVK layout inward no 3 & 4 of yelahanka division (PACKAGE NO-03)"

Item No	Description Of Work	Unit	Standards	Quantities				Total Quantity
				1st&Part		2nd&Part		
1	KSRRB M2900-1. Plain cement concrete M10 mix with crushed stone aggregates 40mm nominal size mechanically mixed, placed in foundation and compacted by vibration completed as per specifications	Cum	Per 100 Cum	810.20	12.00	0.00	0.00	810.20
2	KSRRB M2200-6. Providing TMT Bars Fe 500 steel reinforcement for RCC work including Straightening, cutting, bending, hooking, placing in position, lapping and/or welding whereever required, tying with binding wire and anchoring to the adjoining members whereever necessary completed as per specification.	Tonnes	For each Dia	95.13	2.00	0.00	0.00	95.13
3	providing and laying plain/reinforced cement concrete for drain walls and bottom thickness 15cm using M20 nominal mix concrete with OPC at 300kgs. With 20mm and down size granite metal coarse aggregates at 0.69cum and fine aggregates at 0.43 cum machine mixed, well compacted for walls and bottom completed as per specification.	Cum	Per 50 Cum	1493.68	24.00	0.00	0.00	1493.68
4	supplying and fixing precast reinforced concrete slab 100mm thick of mix M20 using 20mm and downside graded granite metal using reinforcement 10mm dia steel at 150mm c/c both ways Completed as per specification.	Sqm	Per 500 Sqm	3924.99	9.00	0.00	0.00	3924.99

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5	Providing and fixing RCC precast cover slab of 250mm thick for drain in cement concrete 1:1.5:3 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per drawing and the directions of Engineer in-charge.	Sqm	Per 50 Sqm	161.28	6.00	0.00	0.00	161.28
6	Providing and fixing pre cast solid cement concrete kerb stones made out of CC 1:2:4 with top and bottom width 114 and 165 mm respectively, 400mm high and 450mm in length finished with CM 1:3 plastering and finishing cutting including formwork, curing, including cost of materials, labour charges of machinery, loading and unloading, lead and lift, transportation ete ,complete.	No's	Per 250 No's	7585.00	6.00	0.00	0.00	7585.00
7	Construction of granular sub-base Grading-V as Sub-base and drainage layer by providing coarse graded crushed stone aggregates of granite/ trap/basalt material, mixing in a mechanical mix plant at OMC, Carriage of mixed material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the 98 % proctor density, complete as per specifications.	Cum	Per 400Cum	3721.97	9.00	0.00	0.00	3721.97
8	KSRRB M400-17. Providing, laying, spreading and compacting cushed stone aggregates of granite / trap / basalt to wet mix macadam specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed materials by tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications.	Cum	Per 400 Cum	6910.74	9.00	0.00	0.00	6910.74
	KSRRB M500-17. Providing and laying dense graded bituminous macadam using crushed aggregates of specified grading, premixed with VG30 grade bituminous binder and, transporting the hot mix to work site, laying to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction in all respects complete as per specifications Clause 505 of MORTH V revisionusing 40/60 TPH capacity H.M.P. with Mechanical	Cum	Per 250 Cum	625.11	8.00	923.72	8.00	1548.83

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11	KSRRB M600-1.Providing and Constructing dry lean cement concrete mix CC 1:5:10 base with OPC 25mm and down size graded granite metal coarse aggregate at 0.86cum and fine aggregates @0.58cum over a prepared sub-base, coarse and fine aggregate conforming to IS: 383-2016,aggregate cement ratio not to exceed 15:1, Aggregate gradation after blending to be as per Table 600-1,optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days,	Cum	Per 100 Cum	134.36	6.00	0.00	0.00	134.36
12	Constructing un-reinforced, plain cement concrete for pavements using Grade concrete M30 over a prepared base with OPC coarse aggregate at 0.69 cum, fine aggregates at 0.46 cum,Coarse and fine aggregate conforming to IS:383-2016, with Superplastizer at 3 lts conforming to IS 9103-2008. mixed in a concrete mixer of not less than 0.6 cum capacity and appropriate weigh batcher as per approved mix design, laid in approved fixed side form work (steel channel, laying and fixing of 125 micron thick polythene film, wedges, steel plates including levelling the form work as per drawing) & spreading the concrete with shovels,	Cum	Per 50 Cum	309.42	6.00	0.00	0.00	309.42

With respect to the above subject and name of work, We have inspected the work , Quantity and Quality of above mentioned Items of work was found to be satisfactorily completed for the 2nd and Final Bill.

Thanking You,

With Regards,
For Karnataka Material Test House Pvt Ltd.,

Managing Director